

NEW

# Micro-gripper

## ADE series

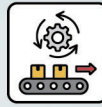
> Bore size: Ø8, Ø10, Ø12, Ø16, Ø20

> **Stainless steel gripper**

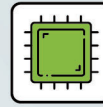
Gripper finger made of SUS630 with extremely corrosion resistant



Industries served



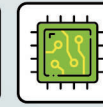
AUTOMATIONS



ELECTRONICS



OPTOELECTRONICS



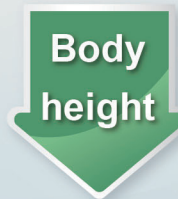
SEMICONDUCTORS



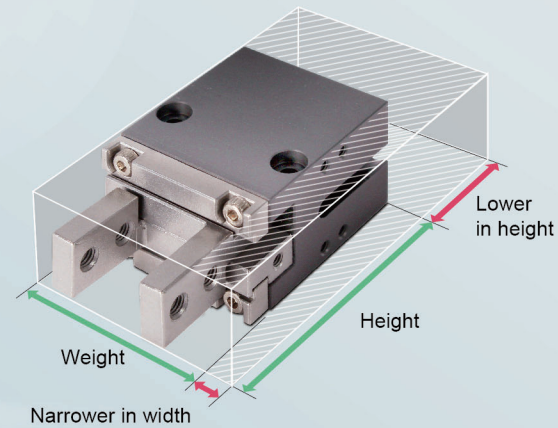
MACHINE TOOLING

> **Extreme space - compact**

Sophisticated design, volume reduction by **50%**



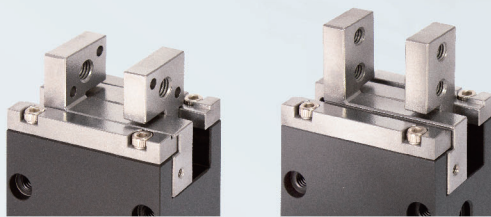
Height reduction by **31.6 mm**



\*These values are in comparison to the existing product ADP

> **Two types of gripper blades for option.**

Two types of finger options to each size of Micro-gripper allow in different working equipment.

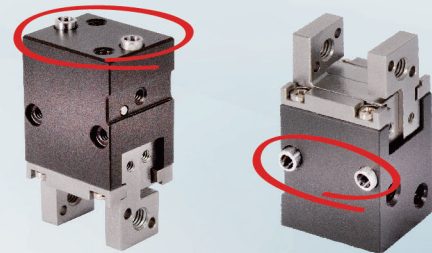


Shorter gripper – regular type

Longer gripper – L-type

> **Convenient multiple positioning directions.**

Multi-direction securing for easier operation. The positioning sleeves included with the product to achieve more accuracy.



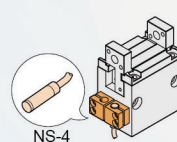
> **Prevents dust particles larger than 0.1mm from entering.**

The main shaft is designed to open and close the gripper. When closed, it provides a basic dust preventing function.

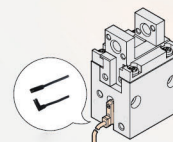


> **Multiple sensing devices.**

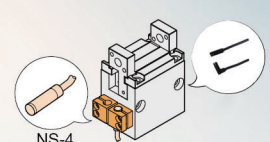
A magnet sensing unit can be installed within the body. The external side is designed for connecting the proximity switch. When in use, it can be connected to the desired sensing control point.



● Using the proximity switch.



● Using the sensor.



● Using the proximity switch + sensor



# ADE

## Comp act Plus 2-Finger Parallel Gripper



### Feature

- The quins structure gives a high closing/opening repeatability.
- Thanks to the materials and surface coating used, the gripper offers a high reliability.
- The versatile dust-proof system against the entrance of impurities and preventing the lubricant drift.
- Self-centering and positioning repeatability

### Specification

Item	Bore size (mm)	Ø08	Ø10	Ø12	Ø16	Ø20
Action		Double acting				
Fluid		Air				
Pressure range	kgf / cm <sup>2</sup> (kPa)	1.5 ~ 7 ( 150 ~ 700 )				
Ambient and fluid temperature	°C	0 ~ 60				
Max. operation frequency	time/min	100				
Lubrication		Lubrication free type				
Max. gripper point length (L)	mm	20	25	30	40	50
Gripper stroke	mm	3	4	6	8	12
Port size		M3 x 0.5P			M5 x 0.8P	



## Code of order

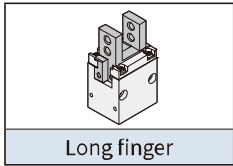
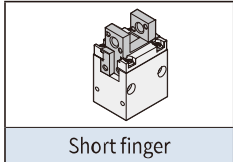
### ADE 16 - L - M - NS4-2 - S - AMS-L-2

1 2 3 4 5 6 7 8

1	Mark	Bore size (mm)
	08	Ø8
	10	Ø10
	12	Ø12
	16	Ø16
	20	Ø20

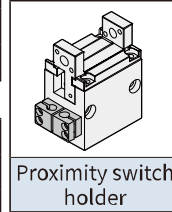
2	Mark	Gripper type
	None	Short finger
	L	Long finger

Image

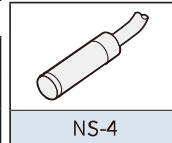


3	Mark	Proximity switch holder
	None	Without proximity switch holder
	M	With proximity switch holder

Image



4	Mark	Proximity switch
	None	Without proximity switch
	NS4	NS-4



5	Mark	Proximity switch quantity
	1	With 1 proximity switch
	2	With 2 proximity switch

How to select proximity switch and holder quantity

Bore size	Ø08, Ø10		Ø12~ Ø20	
Proximity switch quantity	1	2	1	2
Switch holder quantity	1	1	1	2

6	Mark	Sensing device
	None	Without magnet
	S	With magnet

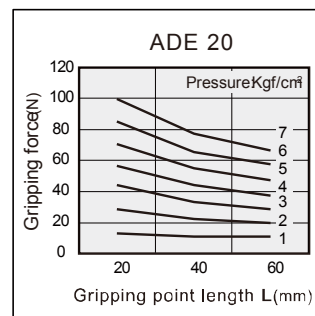
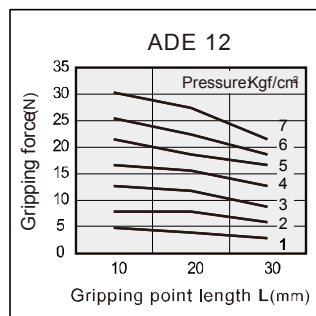
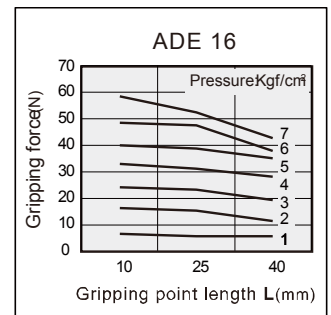
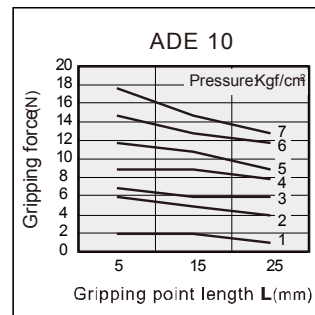
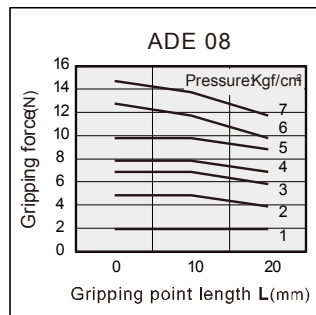
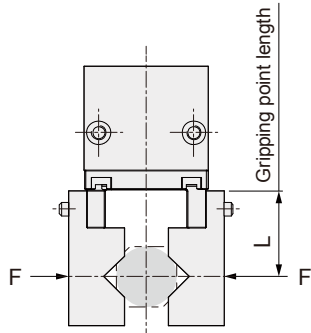
• Ø08 exclude magnet, no sensor switch option.

7	Mark	Sensor switch
	None	Without sensor switch
<p>A M S L</p> <p>M : 2 wire Without contact L : straight cable            N : 3 wire Without contact(NPN) V : angle cable(90°)            P : 3 wire Without contact(PNP)            wire length-L:2000mm</p>		

• Ø10~20 apply sensor switch option, Ø08 apply proximity switch only.

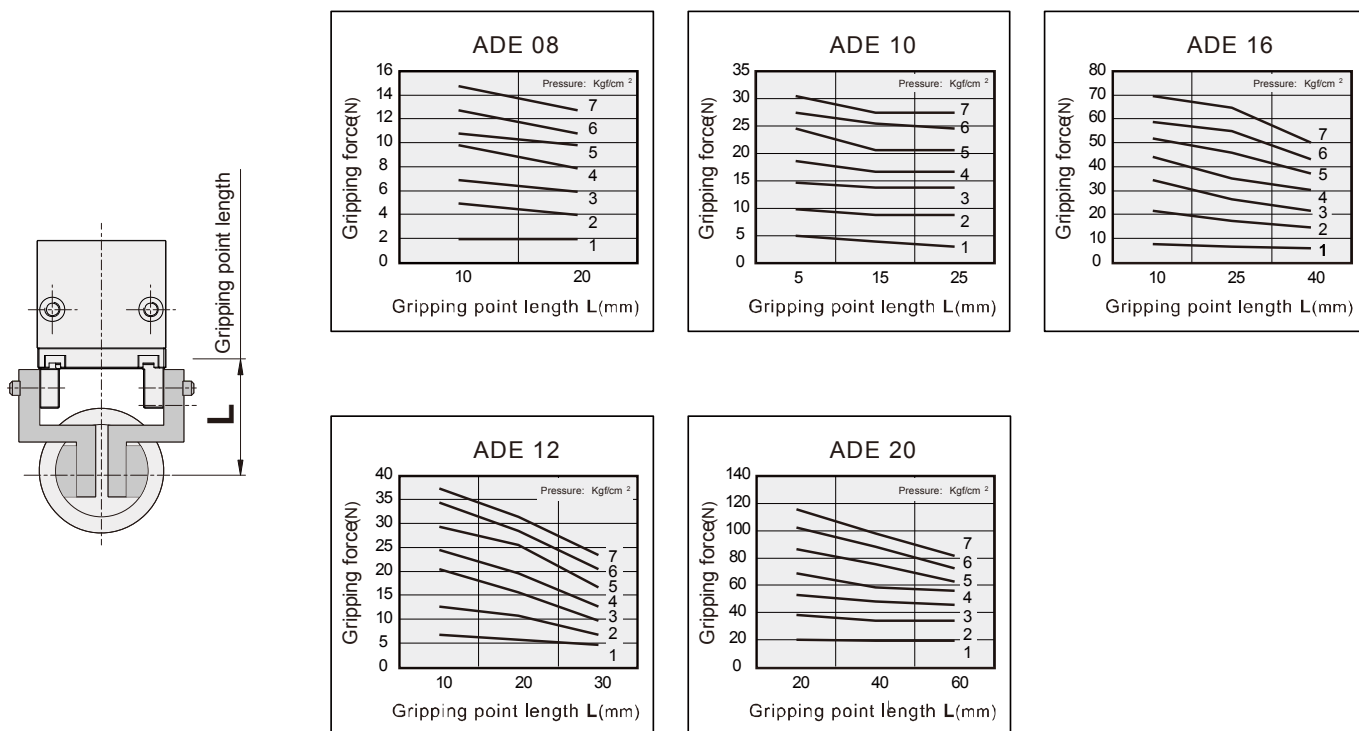
8	Mark	Sensor quantity
	1	With 1 sensor switch
	2	With 2 sensor switches

## External grip force characteristic





## Internal grip force characteristic

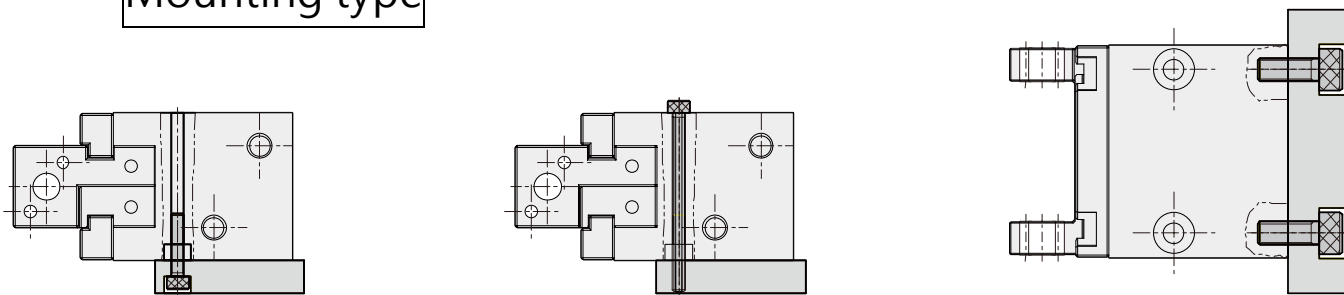


## Operating type and data

Model	Bore size(mm)	The smallest operating pressure (kgf/cm <sup>2</sup> )	Thread port (mm)	Effective gripping force (N)	
				Open	Close
ADE 08	08	2.2	2-M3x0.5P	Open	9
				Close	10
ADE 10	10	2.2	2-M4x0.7P	Open	9
				Close	21
ADE 12	12	1.5	2-M4x0.7P	Open	19
				Close	26
ADE 16	16	1.5	2-M5x0.8P	Open	40
				Close	47
ADE 20	20	1.5	2-M5x0.8P	Open	56
				Close	77

Note: The gripping force is the force of open and close gripper which in the length of gripping point is 20mm and acting pressure is 5kgf/cm<sup>2</sup>.

## Mounting type



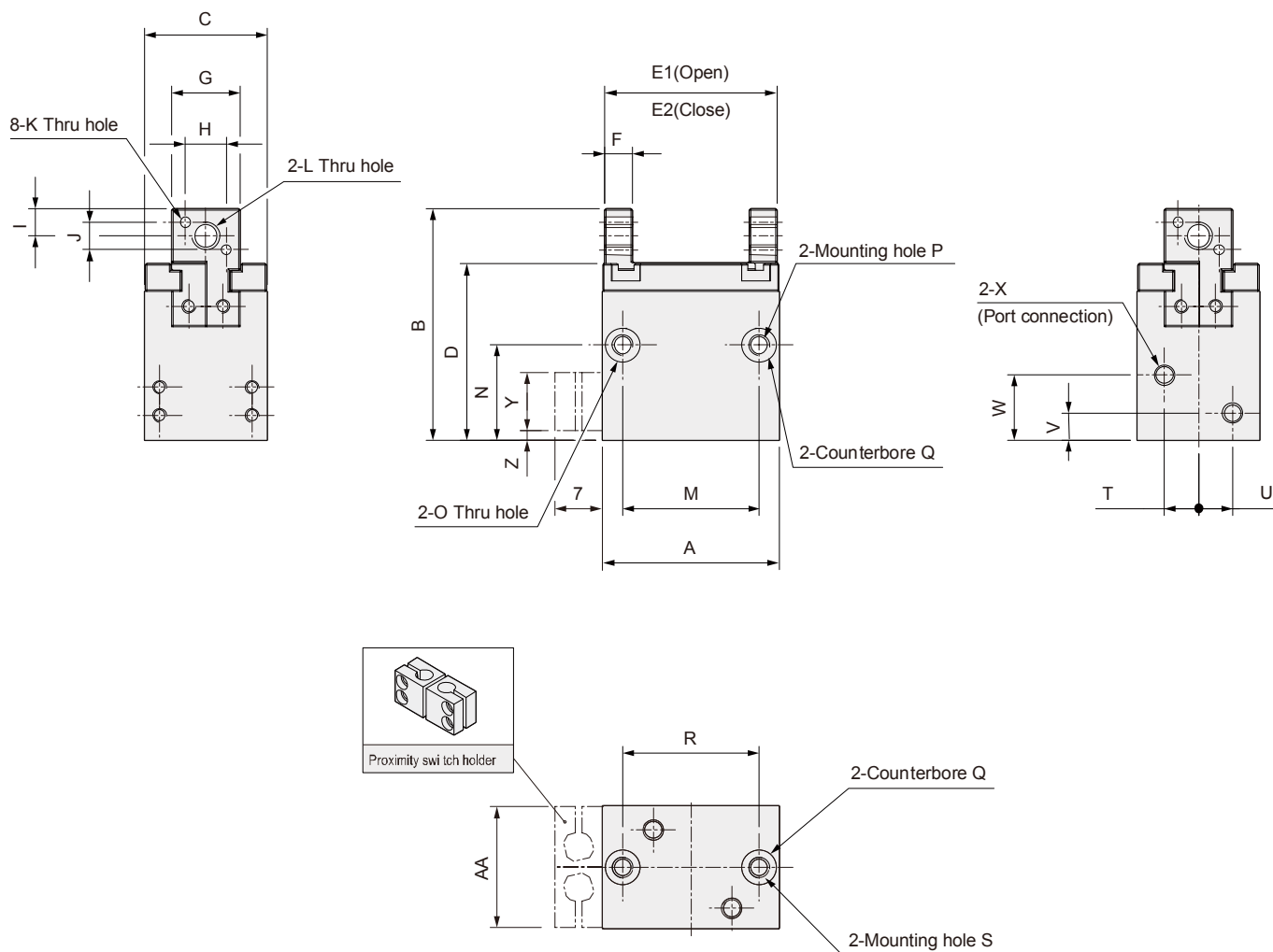
1. Thread to front side

2. Through hole to front side

3. Thread to bottom



## ADE 08~20 (Short finger/ Without magnet)



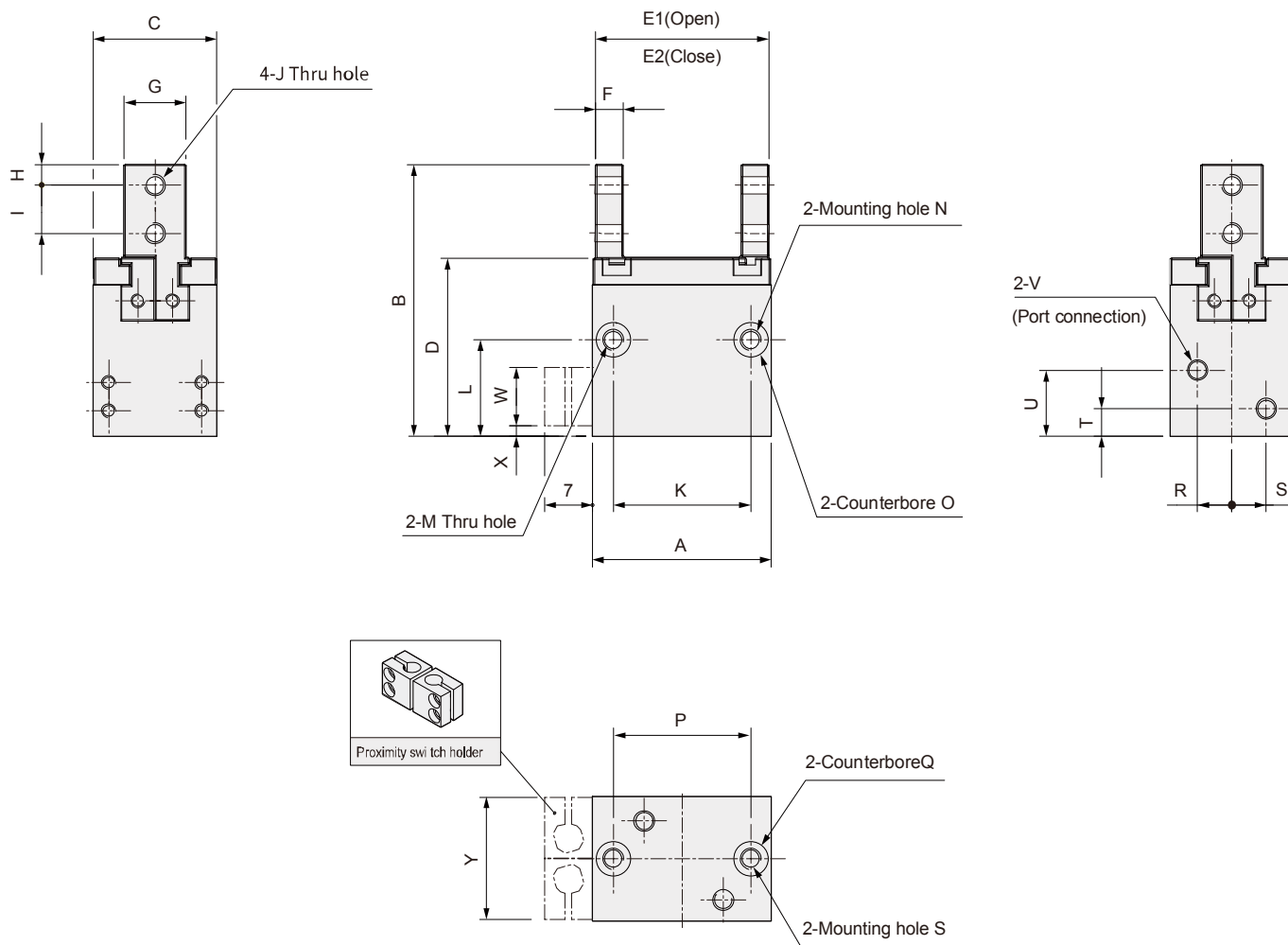
Unit: mm

Mark Model	A	B	C	D	E1	E2	F	G	H	I	J	K	L	M	N	O
ADE 08	16	28	13	20.9	16	13	3	8	5	3.5	3	Ø1.5	M3x0.5P	12	11	Ø1.6
ADE 10	20	32	16	23.9	20	16	3.5	9	6	4	4	Ø1.5	M4x0.7P	15	12	Ø2.1
ADE 12	26	34	18	25.6	25	19	4	10	6	4	4	Ø1.5	M4x0.7P	20	14	Ø2.5
ADE 16	32	43	22	32.9	32	24	5	12	8	5	5	Ø2	M5x0.8P	25	17	Ø3.3
ADE 20	40	50	26	37.9	40	28	6	16	10	6	6	Ø2	M5x0.8P	32	20	Ø3.3

Mark Model	P	Q	R	S	T	U	V	W	X	Y	Z	AA
ADE 08	M2x0.4Px4 dp	Ø3x1 dp	12	M2x0.4Px4 dp	3.2	3.2	4	7.5	M3x0.5P	4	4.7	12.6
ADE 10	M2.5x0.45Px6 dp	Ø4x2 dp	15	M2.5x0.45Px5.5 dp	4.5	4	4	8.5	M3x0.5P	8	2.2	15.6
ADE 12	M3x0.5Px6 dp	Ø5x2 dp	20	M3x0.5Px7.5 dp	5	5	4	9.6	M3x0.5P	8.5	1.5	17.7
ADE 16	M4x0.7Px8 dp	Ø6x2.5 dp	25	M4x0.7Px9 dp	6.5	6.5	5	11	M5x0.8P	8.5	6.8	18.6
ADE 20	M4x0.7Px8 dp	Ø6x2.5 dp	32	M4x0.7Px9 dp	7	7	5	13.6	M5x0.8P	8.5	9.1	21.6



**ADE 08~20 (Long finger / Without magnet)**

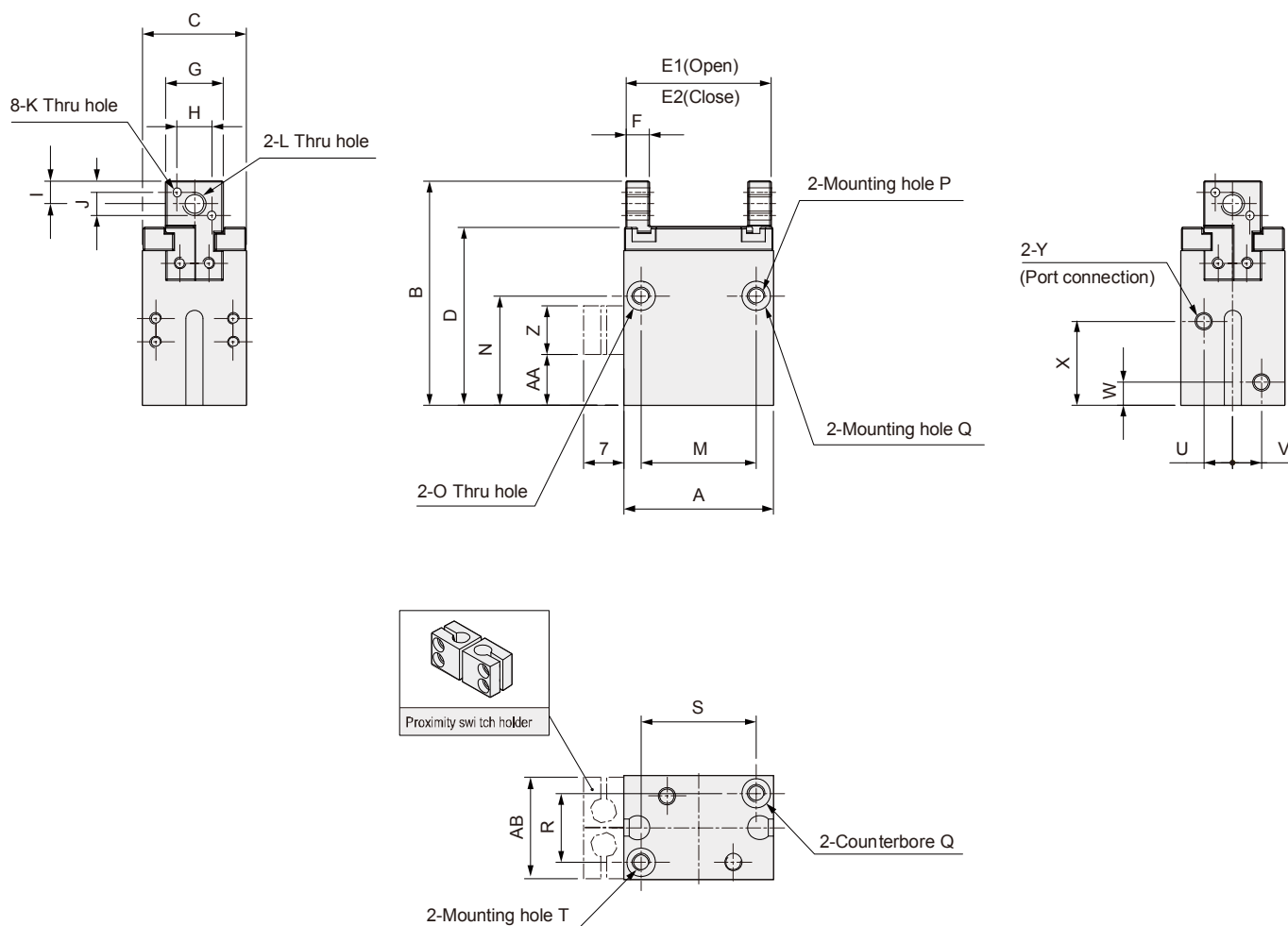


Unit: mm

Model \ Mark	A	B	C	D	E1	E2	F	G	H	I	J	K	L	M	N
ADE08	16	30	13	20.9	16	13	3	6	2	4.5	M3x0.5P	12	11	Ø1.6	M2x0.4Px4 dp
ADE 10	20	36.5	16	23.9	20	16	3.5	7	3	6	M4x0.7P	15	12	Ø2.1	M2.5x0.45Px6 dp
ADE 12	26	39.5	18	25.6	25	19	4	9	3	6.5	M4x0.7P	20	14	Ø2.5	M3x0.5Px6 dp
ADE16	32	47	22	32.9	32	24	5	11	3	7	M5x0.8P	25	17	Ø3.3	M4x0.7Px8 dp
ADE 20	40	55	26	37.9	40	28	6	12	4	8.5	M5x0.8P	32	20	Ø3.3	M4x0.7Px8 dp

Model \ Mark	O	P	Q	R	S	T	U	V	W	X	Y
ADE08	Ø3x1 dp	12	M2x0.4Px4 dp	3.2	3.2	4	7.5	M3x0.5P	4	4.7	12.6
ADE 10	Ø4x2 dp	15	M2.5x0.45Px5.5 dp	4.5	4	4	8.5	M3x0.5P	8	2.2	15.6
ADE 12	Ø5x2 dp	20	M3x0.5Px7.5 dp	5	5	4	9.6	M3x0.5P	8.5	1.5	17.7
ADE16	Ø6x2.5 dp	25	M4x0.7Px9 dp	6.5	6.5	5	11	M5x0.8P	8.5	6.8	18.6
ADE 20	Ø6x2.5 dp	32	M4x0.7Px9 dp	7	7	5	13.6	M5x0.8P	8.5	9.1	21.6

## ADE 10~20(Short finger/ With magnet)



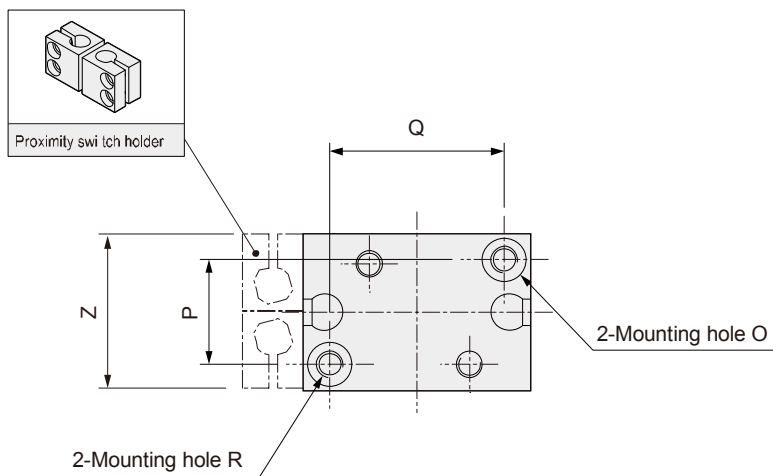
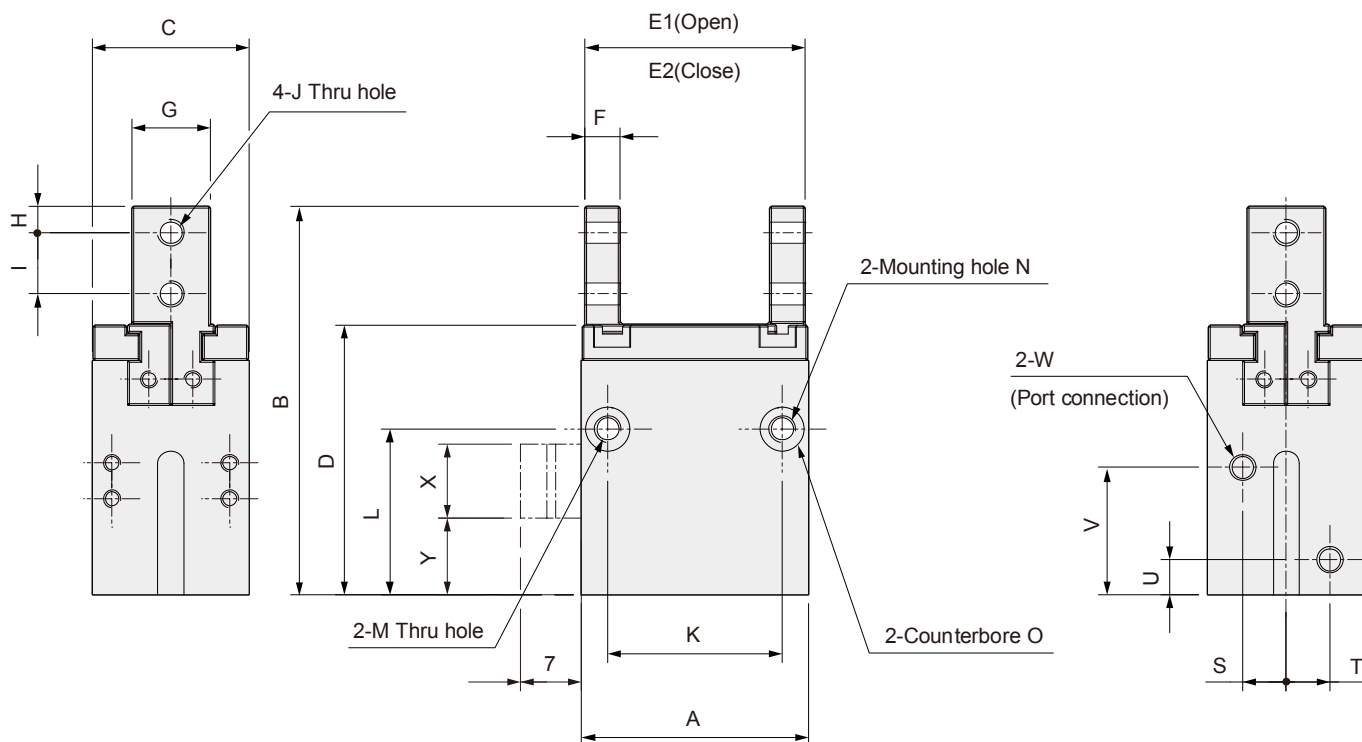
Unit: mm

Mark Model	A	B	C	D	E1	E2	F	G	H	I	J	K	L	M	N	O	P
ADE 10	20	37	16	28.9	20	16	3.5	9	6	4	4	Ø1.5	M4x0.7P	15	17	Ø2.1	M2.5x0.45Px6 dp
ADE 12	26	39	18	30.9	25	19	4	10	6	4	4	Ø1.5	M4x0.7P	20	19	Ø2.5	M3x0.5Px6 dp
ADE 16	32	48	22	37.9	32	24	5	12	8	5	5	Ø2	M5x0.8P	25	23	Ø3.3	M4x0.7Px8 dp
ADE 20	40	55	26	42.9	40	28	6	16	10	6	6	Ø2	M5x0.8P	32	27	Ø3.3	M4x0.7Px8 dp

Mark Model	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
ADE 10	Ø4x2 dp	11	15	M2.5x0.45Px5.5 dp	4.5	4.5	4	13.5	M3x0.5P	8	7.2	15.6
ADE 12	Ø5x2 dp	12	20	M3x0.5Px7.5 dp	5	5	4	15	M3x0.5P	8.5	8.8	17.7
ADE 16	Ø6x2.5 dp	15	25	M4x0.7Px9 dp	6.5	6.5	5	17	M5x0.8P	8.5	11.8	18.6
ADE 20	Ø6x2.5 dp	16	32	M4x0.7Px9 dp	7	7	5	20.6	M5x0.8P	8.5	14.1	21.6



ADE 10~20 (Long finger/ With magnet)



Unit: mm

Mark / Model	A	B	C	D	E1	E2	F	G	H	I	J	K	L	M	N
ADE 10	20	41.5	16	28.9	20	16	3.5	7	3	6	M4x0.7P	15	17	Ø2.1	M2.5x0.45x6 dp
ADE 12	26	44.5	18	30.9	25	19	4	9	3	6.5	M4x0.7P	20	19	Ø2.5	M3x0.5x6 dp
ADE 16	32	52	22	37.9	32	24	5	11	3	7	M5x0.8P	25	23	Ø3.3	M4x0.7x8 dp
ADE 20	40	60	26	42.9	40	28	6	12	4	8.5	M5x0.8P	32	27	Ø3.3	M4x0.7x8 dp

Mark / Model	O	P	Q	R	S	T	U	V	W	X	Y	Z
ADE 10	Ø4x2 dp	11	15	M2.5x0.45x5.5 dp	4.5	4.5	4	13.5	M3x0.5P	8	7.2	15.6
ADE 12	Ø5x2 dp	12	20	M3x0.5x7.5 dp	5	5	4	15	M3x0.5P	8.5	8.8	17.7
ADE 16	Ø6x2.5 dp	15	25	M4x0.7x9 dp	6.5	6.5	5	17	M5x0.8P	8.5	11.8	18.6
ADE 20	Ø6x2.5 dp	16	32	M4x0.7x9 dp	7	7	8	20.6	M5x0.8P	8.5	14.1	21.6